LAB EXAM

Object Oriented Programming with Java 8

1. Create a class named Faculty with data members facultyid and salary.

Create class named FullTimeFaculty with data members basicpay and allowance and inherits class Faculty.

Create class named PartTimeFaculty with data members hour and rate and inherits class Faculty.

Create methods for accepting input from the user, calculating salary and displaying data in both the sub classes. Salary should not be accepted. Salary is calculated on the basis of (basicpay+allowance) for FullTimeFaculty and (hour*rate) for PartTimeFaculty.

Create class XYZ for main method in which it accepts FullTimeFaculty information and

PartTimeFaculty information from user, calculate salary and print the details of each faculty.

Ans= Code,

Part1,

```
import java.util.Scanner;

class Faculty
{
        int facultyid;
        double salary;

        public void acceptDetails()
        {
                Scanner F = new Scanner(System.in);
                System.out.println("Enter Faculty ID: ");
                this.facultyid = F.nextInt();
        }

        public void displayDetails()
        {
                System.out.println("Faculty ID: " +facultyid);
                System.out.println("salary: " + salary);
        }

}
```

Part2,

```
class FullTimeFaculty extends Faculty
{
        int basicpay;
        double allowance;

        public void acceptDetails()
        {
                super.acceptDetails();
                Scanner Ft = new Scanner(System.in);
                System.out.print("Enter Basic Pay: ");
                this.basicpay = Ft.nextInt();
                System.out.print("Enter Allowance: ");
                this.allowance = Ft.nextDouble();
        }

        public void calculatedSalary()
        {
                salary = basicpay + allowance;
        }
}
```

Part3,

```
class PartTimeFaculty extends Faculty
{
        int hour;
        double rate;

        public void acceptDetails()
        {
                super.acceptDetails();
                Scanner Pt = new Scanner(System.in);
                System.out.print("Enter Hours: ");
                this.hour = Pt.nextInt();
                System.out.print("Enter a rate per Hour: ");
                this.rate = Pt.nextDouble();
        }

        public void calculatedSalary()
        {
                salary = hour * rate;
        }
}
```

Part4,

```
class XYZ
{
        public static void main(String[] args)
        {
                FullTimeFaculty FTF = new FullTimeFaculty();
                System.out.println("Enter Full Time Faculty Details: ");
                FTF.acceptDetails();
                FTF.calculatedSalary();

                PartTimeFaculty PTF = new PartTimeFaculty();
                System.out.println("\n Enter Part Time Faculty Details: ");
                PTF.acceptDetails();
                PTF.calculatedSalary();

                System.out.println("\nFull Time Faculty Details: ");
                FTF.displayDetails();

                System.out.println("\nPart Time Faculty Details: ");
                PTF.displayDetails();
        }
}
```

Compilation & output,

```
C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>javac XYZ.java

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>java XYZ
Enter Full Time Faculty Details:
Enter Faculty ID:
1
Enter Basic Pay: 86200
Enter Allowance: 36204

 Enter Part Time Faculty Details:
Enter Faculty ID:
2
Enter Hours: 36
Enter a rate per Hour: 720

Full Time Faculty Details:
Faculty ID: 1
salary: 122404.0

Part Time Faculty Details:
Faculty ID: 2
salary: 25920.0

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>
```